

pain had spread to the knees and it soon extended to the toes. All this was accompanied by a low fever. The experimenter found relief by bathing in hot water, and thus spared himself considerable pain. He stated, that it is only under the greatest provocation that the spider can be made to bite humans.

### The Use of Arsenic in Mosquito Control

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A matter that has given us some trouble in the greenhouses is the mosquitoes *Aedes aegypti* (Linn.), breeding in our water cultures. I experimented by applying Paris green at the rate of about one part to a million of water. This was very effective in destroying the wrigglers, but the pineapple roots were also injured by it. I then tried lead arsenate, which is only slightly soluble, using the same strength. This gave perfect results. The mosquito wrigglers soon died and there was no apparent injury to roots.

Paris green was first used for the control of Anopheles larvae by M. A. Barber and T. B. Hayne\*. Their experiments showed that this chemical was more effective than calcium arsenate, arsenate of lead or arsenious acid. Airplane dusting for the control of malaria mosquitoes began in 1923.\*\* It is now used over extensive areas of marshes by the U. S. Department of Agriculture. Since so small an amount of the poison is effective, some form of inert dust is required as a diluent and carrier. For this purpose a finely ground silica earth found to have about the same density as Paris green, proved very satisfactory; dilution 1 of the poison to 100 of the dust.

Such light applications of Paris green showed no injurious effects upon vegetation in the marshes. Furthermore, the treated waters were proved harmless to stock. My problem in the greenhouses, however, was somewhat different. I had tender pineapple roots suspended in water cultures, usurped by mosquito larvae. The value of the less soluble lead arsenate in such cases has been demonstrated.

\* Arsenic as a larvicide for anopheline larvae. In U. S. Pub. Health Serv., Pub. Health Rept. Vol. 36, pp. 3027-3034. 1921.

\*\* W. V. King and G. H. Bradley. Airplane dusting in the control of malaria mosquitoes. U. S. Dept. Agr. Circ. 367, April, 1926.